Avaya™ P550®/P580®/P880®/P882® ATM Uplink Module Release Notes - Version 1.2.7

Overview

This set of release notes supports the Cajun P550/P880/P580/P882 ATM Uplink Module (referred to as the ATM Uplink module), Version 1.2.7 for Cajun P550, P580, P880, and P882 switches. For detailed information about your product, refer to the basic set of user documentation.

You can access the latest release notes and other documentation online at:

http://pubs.avayactc.com/

The following topics are covered:

Important Information

This section contains information that is crucial to know before installing or using the ATM Uplink module.

CAUTION

The ATM Uplink module is a 50 Series module. If you are installing it in an Avaya P580 or P882 switch, you must make sure the switch is set in Fabric I mode. For more information, refer to the *Cajun P550R/P580/P880/P882 Switch User Guide, Version 5.0*.

CAUTION

The Avaya P550/P880 ATM Uplink module requires supervisor software Version 5.1 or higher for RFC1483 support on your Avaya P550, P580, P880, and P882 switch. Refer to the *Cajun P550R/P580/P880/P882 Switch Release Notes, Version 5.1* for more information.

CAUTION

When making configuration changes to the switch or to the ATM Uplink module, you must save changes by copying the running configuration (running config) to the startup configuration (startup config) on the supervisor module to ensure that the changes remain after the switch is restarted.

CAUTION

Do not copy the startup config to the running config. To return to a previous configuration, reset the switch without saving the running config to startup config.

CAUTION

Do not reboot the ATM Uplink module after downloading new boot code until the checksum has been verified. Use the `show flash` command to verify that the checksum is valid. If an error occurs, you must download the boot code again.

ATM Uplink Module and Cajun Switch Support

Table 1 lists the ATM Uplink Module versions that are supported by the specific versions of the Cajun Switch software.

Table 1. ATM Uplink Module Versions

ATM Uplink Release	v1.0.4	v1.1	v1.2-1.2.4	v1.2.5-1.2.7
Cajun Switch Software Release				
v4.3.5 - LANE only, no RFC1483	supported	supported	supported	not-supported
v5.0 - L2 Support discontinued	supported	not-supported	not-supported	not-supported
v5.0.1	not-supported	supported	supported	not-supported
v5.1.x	not-supported	supported	supported	not-supported
v5.2.0/5.2.1	not-supported	supported	supported	not-supported
v5.2.2	not-supported	supported	supported	not - supported
v5.2.10	not-supported	not-supported	not - supported	supported
v5.2.12	not-supported	not-supported	not - supported	supported

Upgrading Notes

- If you are configuring RFC1483, you must obtain a license key. Contact your Sales representative or your Avaya Support representative if you have not ordered one.
- If you want to configure RFC1483 and you are upgrading from the ATM Uplink module version 1.0.x, make sure your FPGA code is version 29 or higher. If it is not, please contact your Avaya Service Representative for details.

  To find out what version of the FPGA code you are running:

  a. Open the ATM Uplink module CLI using the following switch CLI command:

```
>session <mod-num>
```

where <mod-num> is the switch slot where the ATM Uplink module resides.

b. Press **Enter**.

c. Enter **`legacy`**.

d. Press **Enter**.

e. Enter **`diag version`**.

*** Note:** The FPGA revision number line should read v1.0.29 or higher for RFC1483 functionality.

Reconfiguring a VSP

*** Note:** If you are upgrading from Version 1.1 to Version 1.2.x and have created a Virtual Switch Port (VSP) on Port 2, the VSP reverts back to the default (Port 1). You must reconfigure the VSP.

To reconfigure the VSP:

a. Select **Modules & Ports > Configuration** from the Web Agent. The **Module Information** dialog box opens.

b. Locate the ATM Uplink module that contains the module information you want to view.

c. Click the switch port number from the **Switch Ports** column for that ATM Uplink module. The **Switch Ports** dialog box opens.

d. Click **Manage Virtual Switch Ports**. The **Virtual Switch Ports** dialog box opens.

*** Note:** You may have to scroll down to see the **Manage Virtual Switch Ports link**.

e. Select the **VSP** you want to modify in the **ID** column.

f. Click **Modify**. The **Modify Virtual Switch Port** dialog box opens.

g. Select **Disabled** from the **Administrative Status** pull-down menu.

h. Click **Apply**.

i. Select **2** from the **Default Port** pull-down menu.

j. If the value of Packet Replication is **No**, enter the Default Permanent Virtual Connection (PVC) in the **Default PVC Port 2** field .

k. Click **Apply**.

l. Select **Enabled** from the **Administrative Status** pull-down menu.

m. Click **Apply**. Your default Port is now Port 2.

General Notes

- This release supports a maximum of 128 switch ports.
- When you create an IP Interface to which a Routed-VSP will be bound, the Interface Type must be NBMA not Ethernet LAN.
- The Web Agent may display misleading Spanning Tree Protocol information. When you are using UNI on both (physical) ports on the ATM Uplink module, traffic may flow through either (physical) port 1 or (physical) port 2, depending on path cost. The Spanning Tree information on the Web Agent will indicate that Port 1 of the ATM Uplink module is active and forwarding traffic. This is because from the switch's perspective, it "sees" the LEC as a Virtual Switch Port, not the actual physical ports. So regardless of which physical port is passing the traffic, the LEC (Virtual Switch Port) is seen as active.
- If you have redundant supervisor modules in your switch, and you make changes to the ATM Uplink module's running configuration, you need to save the running configuration to the startup configuration and then synchronize with the redundant supervisor module.
- Do not enable Fast Start on the Switch Port Configuration screen. Fast Start is Disabled by default.
- There may be interoperability issues with Cisco's Light Stream 1010 when configured with UNI 4.0 or UNI 3.0.
- The Static LAFT Address Configuration screen is not yet implemented.
- You may experience browser-related anomalies when using the Web Agent. If this occurs, try switching or upgrading your browser. Avaya recommends you change your

browser's setting to reload frames every time you go to a page to prevent the browser from displaying frames from the local cache.

- Performing an NVRAM init and then resetting an ATM Uplink module causes the "startup config" to report the module as "Unknown". This does not affect functionality.
- After installing the ATM Uplink module into a Cajun switch, you must wait 30 seconds for the switch to power up the module. This is true for all of the modules that are installed in the switch, not just the ATM Uplink module.
- All ATM protocols supported by the ATM Uplink module are ATM Forum standard. For more information about the ATM Forum, go to the following web site:

  http://www.atmforum.com

New Features

The new major features of the ATM Uplink module in Version 1.2 are:

- Routed VSPs

  Support for RFC1483 LLC encapsulation of routed PDUs.
- Failover for RFC1483

  Allows you to configure two VCs on different physical ports. When the primary port fails, the secondary port takes over. The physical ports must be on the ***same*** module.
- Support for the Load MIB
- Ability to Flush LE_ARP Cache
- Targetless LE_ARP Request
- Version 1.2.7 is a maintenance release of Version 1.2. See Corrected Problems for content changes.

Product Binaries

Table 2 lists the binary file that contains embedded software for the ATM Uplink module, Version 1.2.7.

Table 2. Product Binary Files

Module	Binary File	Boot Code
Cajun P550/P880 ATM Uplink Module	atmupl_v1.02.07.bin	vboot_v1.02.00.bin

Corrected Problems

This section lists the problems from Version 1.2.5 that have been resolved in Version 1.2.7.

- A problem existed when handling duplicate triggers for LeARPs. This problem has been resolved.
- The ATM Uplink module appended an extra 4 bytes to packets whose length allows the last ATM cell of that packet to contain only one byte. This problem has been resolved.

  *** Note:** You ***must*** upgrade the FPGA code to Version 1.0.32 in order to correct this problem. Please contact your Avaya Support Representative for details.

Known Problems and Workarounds

The following section lists known problems associated with the ATM Uplink module. When available, a workaround to a problem is presented.

- There is a problem when disabling a Vport attached to a device that has 60 OSPF interfaces configured. Some of the LECs may not come back to an operational state.
- You can set the name and default-port of a VSP while it is enabled using the CLI. Disabling the VSP before making any parameter changes is recommended.

- You can set the LEARP Trigger Count to 0 using the Web Agent even though the valid range is 1 to 20. If the ATM Uplink module is reset, the LEARP Trigger Count value will be 5 instead of a default value of 1.
- If a packet is routed by an 80 series supervisor, the ethernet priority tag is overwritten by the supervisor.
- If you add a second ATM Uplink module to a chassis, and create a LEC for the same VLAN for which the first module also has a LEC, the second ATM Uplink module's Proxy List will have all of the MAC addresses learned via Ethernet as well as all of the learned MAC addresses from the ATM link on the first ATM Uplink module. In other words, the second LEC will act as if it is proxying for the hosts accross the ATM Link on the first module.
- If you are using a one-armed routing configuration over Routed VSP's and the link's utilization approaches 50%, packets begin to drop; and, OSPF Neighbors are displayed with a status of "INITIALIZE" or as "No Active OSPF Neighbors". In some cases, the neighbors will return in 10 minutes.
- When you disable a physical port, the L.E.D. turns green. The L.E.D. should turn off.
- When you disable a physical port, it is not saved in the Startup Config file. When you reset the module, the physical port comes up as enabled.
- The web interface may display DDVCCs with a random VPI number. This is a display problem only.
- The Traffic Shape Rate setting for a Virtual Port(VPort) does not function as expected. A SVC or PVC can be created even though the PCR for the VC is greater than the limit set for the VPort. Also, you can create PVCs and SVCs whose combined Peek Cell Rate(PCR) can exceed the limit on the VPort.
- Disabling a LEC and changing its QoS Set RED ID causes the LEC to hang in an "Initial" state.
- Entering an invalid character in a LECs "Max Unknown Frame Time" field, results in a loss of connectivity to the ATM Uplink module.
- When you telnet into a Cajun switch and session to an ATM Uplink module, the TAB key (command completion) is not supported.

- The `show boot` or `show flash` commands from the enhanced CLI may display incorrect information in the last line, for example:

  ```
  At boot-up, image stored as APP1 was loaded
  as specified. Upon reset, image stored as
  BOOT will execute.
  ```

  Upon reset, the image that executes is the one defined by the supervisor module, and not the boot image. The last line should display:

  ```
  At boot-up, image stored as APP1 was loaded
  as specified. Upon reset, image stored as
  Supervisor Specified Image will execute.
  ```

- Do not install the ATM Uplink module in slots 16 or 17 in a Cajun P880/P882 switch.

- Packet replicating VSPs may display an "Oper Status" of **Up** when there are no enabled ATM links.

- If you are creating a Selector or Identifier with a value greater than 99, use the CLI. The Web Agent does not accept a decimal value higher than 99. You can enter the Selector/ Identifier in Hex.

- If an ATM Uplink module is installed in a Cajun P550 switch chassis and traffic is flowing, hot-swapping or resetting a second ATM Uplink module stops traffic until the second ATM Uplink module boots up.

- You can assign the same MUX address to different QoS domains from both the ATM Web Agent and the CLI, however, you should not assign the same MUX address to multiple QoS domains.

- If you have RED enabled on a non-UBR PVC within a link that goes down, failover switches the link but, fails to resume passing traffic.

- Enabling a LEC after modifying a QoS Set used by the LEC, causes panics.

- When creating a UBR PVC using the Web Agent, the CDVT and PCR fields in the "Modify PVC" screen are labeled as reference only but, they require you to enter a value (1 - 10000 for CDVT and 100 - 1412830 for PCR).

- When an nvram init is issued and the ATM Uplink module is reset a panic is seen on boot.

- Enabling RED then Disabling RED on a CBR QoS set will stop traffic from flowing on that link.
- When a startup configuration file contains 128 LECs and the ATM Uplink module is reset, the LEC with ID number 85 is created on the ATM Uplink module but no corresponding switch port entry is made in the supervisor. Therefore, when LEC 85 is deleted on the ATM Uplink module, the supervisor displays a panic message.
- When using UNI 3.1, the ATM Uplink module may release a rt-VBR SVCs. This problem does not occur with UNI 4.0.
- If you have multiple ATM Uplink modules in the same chassis, and you have multiple telnet sessions into different modules, there may be a problem with sessions not timing out properly.

Problem: When downloading a config file to the ATM Uplink module from a TFTP server by issuing Load MIB SETs, the supervisor can hang requiring someone to physically reset the switch. This happens when an SNMP_SETs is issued and before it completes, a second SNMP_SETs is issued. This only happens when the Load MIB is used from a MIB Browser as opposed to downloading a config file via the Web Agent or the CLI.

If this happens, the switch hangs and cannot be reset remotely. You must physically reset the switch by powering off then on the power supplies. Standby supervisor does not take over in this situation.

Workaround: Do not issue another Load MIB set until the L.E.D. marquee stops displaying "`Transfer Complete...`".

Problem: Copying a configuration file from a TFTP server onto the ATM Uplink module using the Web Agent causes the whole switch to reboot without the file being copied. This is only happens with 80 series supervisors running 5.2.12 or below.

Workaround: Use the CLI to copy configuration files on to the ATM Uplink module.

Problem: When you delete a VSP using the CLI, you get an error message containing the following text:

```
...Resource System Error -- FILE: cnxn.cpp LINE:
153 Value 0x6 : [No description available]...
```

Workaround: This is a display problem only. Delete the VSP using the Web Agent.

Problem: When a VSPs is created and enabled with no actual physical link, then the configuration is saved and the supervisor is reset, the VSP comes up as *Oper: Initial* but still brings L3 interfaces to *Oper: Up* status. This results in erroneous information propagated through the network by routing protocols such as RIP or OSPF.

Workaround: If the switch is reset with no physical link on the ATM Uplink module, set the admininstrative state for the VSP to *down*. After the physical link is returned to normal, set the administrative state of the interface to *up*. The ATM Uplink module should now function normally if link fails again.

Problem: Occassionally after downloading new application code, the Web Agent displays the version as 0.0.0. or the CLI will not show the correct application version.

Workaround: Reset the module. The Web Agent and CLI will display the correct application version.

Problem: If you create 128 QoS Domains, the Web Agent cannot display them. You will see an HTTP Timout message.

Workaround: View the QoS Domains using the CLI.

Problem: When using the CLI or Web Agent to create PVCs, you can enter negative numbers or numbers that are out of range for the VPI or VCI.

Workaround: Enter settings that are valid for the VPI or VCI.

Problem: If you attempt to create a QoS Set or a QoS Domain and there already exists a QoS Set or QoS Domain with that name, you will get a misleading error message:

```
"QoS Set new creation failed - QoS Set exists with same name."
```

Workaround: Use unique names when creating QoS Sets and QoS Domains.

Problem: With an 80 series supervisor, downloading the ATM Uplink module configuration file from a TFTP server using the Web Agent resets the switch.

Workaround: Use the CLI to download the ATM Uplink module configuration file.

Problem: If you enter a VPI value greater than 255 in the CLI, the ATM Uplink module restarts the numbering from 0. Therefore, if you enter 256, the PVC is created with a VPI of 0.

Workaround: Enter a VPI value between 0 and 255.

Problem: When using the CLI and you open session to the ATM Uplink module, you may see a "Watchdog Timer Expired" message after downloading software.

Workaround: Ignore the message.

Problem: When viewing QoS Sets on the enhanced CLI for domains other than one, an error message is returned for handle zero stating:

```
>QoS Handle 0 is not found in QoS Domain x
```

This message should not be generated as QoS Handle zero is predefined for all QoS Domains that are created.

Workaround: Ignore this message.

Problem: Physical ports may not come up after being repeatedly disabled, then enabled.

Workaround: Reset the ATM Uplink module.

Problem: Creating a Static ARP entry when using OSPF on an LLC Routed connection causes OSPF to intermittently lose routes over the ATM Link.

Workaround: Do not create a Static ARP entry when using OSPF on an LLC Routed connection.

Problem: If you create at least 120 LECs, then VSPs, and assign unique VLANs to each one, it is possible that some of the VSPs may be assigned to the "Discard" VLAN instead of the "assigned" VLAN after you reset the ATM Uplink module.

Workaround: Reassign the VLANs.

Problem: When you reach the ATM LEC Switch Ports table through the CLI or the "Manage LECs Switch Ports" link in the Web Agent, the LECs may appear as operational and disabled at the same time. When you try to modify and enable the LEC, you receive an error message because the LEC is really enabled. The CLI reports that the LEC is in an "unknown" state.

Workaround: To get the status of the LEC to appear equally everywhere, go to the CLI and disable the "disabled" LEC and then re-enable it. The LEC now appears as operational and enabled. Depending upon the current state of the LEC, you may have to "disable" the LEC a second time.

Problem: The Web Agent interface for the ATM Uplink module does not support deleting a QoS Set.

Workaround: Delete the QoS Domain that includes that QoS Set.

Problem: If you modify a VPI or VCI using the Web Agent, click Apply and then try to modify the same VPI or VCI from that screen, you receive an error.

Workaround: You must modify a VPI or VCI from the "PVCs for ATM Link <link>" screen.

Problem: If you enter all spaces as the name of a VSP, the VSP is not accessible.

Workaround: Do not enter spaces as the name of a VSP.

Problem: Invalidating a MAC address from the supervisor Address Forwarding Table (AFT) prevents that MAC address from aging out of the LEC Proxy table.

Workaround: Allow AFT entries to age out naturally.

Problem: Using “Next Port” or “Prev Port” when there are gaps in the Virtual Switch Port numbers causes the browser to wait indefinitely for a response from the switch.

Workaround: Click on a specific port instead of “Next Port” or “Prev Port”.

Problem: There is a possibillity of seeing a “null stream” error if you use Ctrl-C to exit from a telnet session to an ATM Uplink module.

Workaround: Use the “quit” command to exit from a telnet session to an ATM Uplink module.

Functional Restrictions

The following section lists the Functional Restrictions associated with the ATM Uplink module.

- When you remove an ATM Uplink module from the chassis, the internal network displays a DOWN status in both the Web Agent and CLI. This is a display problem only.
- The ATM Uplink module startup configuration file cannot be larger than 1 MB. As you configure VSPs, ATM Links, and PVCs, you consume that memory. If you exceed the 1 MB limit, you will receive the following error message:

  ```
  File Device is full - unable to allocate a new block
  ```

- When you hot-swap the ATM Uplink module into a slot that has not been configured (not previously used by that module), the default APP1 is used after the module boots up. You must reconfigure all of the VLAN bindings.
- Only the first 28 ATM links/default PVCs are actually in the multicast group for that port.
- The proxy list on the ATM Uplink module does not display all of the MACs for which it is proxying when transmitting 4000+ MACs. The Web Agent reports the incorrect number of proxied MACs. This is a display issue only.

- If eight PVCs are created, the eighth PVC is always displayed in the "Active PVCs for ATM Link <name> (VSPort #)" table even if it is not active. This table should only show the PVCs that are assigned to an Outbound Priority channel. This is a display issue only.
- The LEC proxy list increases when a different LEC begins proxying on the same ATM Uplink module. This is a display issue only.
- Do not use the Intrusion Trap Timer field on the ATM Switch Port Configuration screen, it is not supported.
- When attempting to establish non-UBR traffic class connections on the ATM Uplink module, the ATM switch to which the ATM Uplink module is connected may reject the initial connection request due to lack of resources. The ATM Uplink module retries the connection as UBR. Although this provides maximum connectivity, it may not provide the expected QoS.
- If you are using multiple UBR QoS sets in a domain, you may receive duplicate data directs. To avoid this, configure only one UBR QoS set in your QoS domain.
- When UBR connections are established on a virtual port, the bandwidth limit is ignored for UBR traffic flows.
- The current version of the ATM Uplink module only supports the Spanning Tree per VLAN option. Each VLAN runs a separate Spanning Tree with its own Bridge Protocol Data Units (BPDUs). This allows each LEC to have a Spanning Tree state independent of the other LECs on its module.
- The ATM Uplink module does not support RFC1483 Spanning Tree.

  *** Note:** By default, this option is enabled and should be disabled when creating a VSP.

- If you want to change the parameters for a virtual port, bring down the virtual port, and then change the necessary parameters. You can make changes when the Virtual Network (VNET) is down (in ATM Signalling Settings screen set “Administrative Status” to **DOWN**), however, the LECs may not join, depending on your changes. When you enable your VNET, the LECs remain down, therefore, you need to enable the LECs.

- When a `show VSP` or `show ATM-Link` is entered in the CLI, only the first ten characters of the name are displayed, however using the "show VSP <VSP #>" command displays the full name of the VSP.

Technical Support

To contact Avaya's technical support:

- From the United States:

  1-800-237-0016

- Outside the United States:

  Contact your distributor.

Documentation Feedback

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